

**MISSOURI**  
DEPARTMENT OF  
NATURAL RESOURCES

## Total Maximum Daily Load Information Sheet

### Clear Creek

Water Body ID: 3239

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#### Water Body Segment at a Glance:

<b>Counties:</b>	Barry, Lawrence
<b>Nearby City:</b>	Monett
<b>Length:</b>	3.5 miles
<b>Pollutants:</b>	Nutrients/Eutrophication and Low Dissolved Oxygen
<b>Source:</b>	Monett Wastewater Treatment Facility



#### Schedule for TMDL development:

TMDL development schedules are subject to change.

The most current schedule for TMDL development is available on the department's website at [dnr.mo.gov/env/wpp/tmdl/wpc-tmdl-progress.htm](http://dnr.mo.gov/env/wpp/tmdl/wpc-tmdl-progress.htm)

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#### Other TMDLs:

In 1999, the U.S. Environmental Protection Agency approved a TMDL for Clear Creek that addresses ammonia, biochemical oxygen demand, and non-filterable residue impairments. This TMDL is available online at [dnr.mo.gov/env/wpp/tmdl/3239-clear-ck-record.htm](http://dnr.mo.gov/env/wpp/tmdl/3239-clear-ck-record.htm).

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#### Description of the Problem

A water body is considered impaired when it fails to meet applicable water quality standards. Water quality standards consist of designated uses, water quality criteria, an antidegradation policy and implementation procedures. Clear Creek is impaired due to exceedances of the water quality criteria for the protection of aquatic life.

#### Designated uses of Clear Creek\*

- Warm Water Habitat (WWH)
- Whole Body Contact Recreation Category B (WBC-B)
- Secondary Contact Recreation (SCR)
- Human Health Protection (HHP)
- Irrigation (IRR)
- Livestock and Wildlife Protection (LWP)

\*In addition to these specific uses, all waters of the state are protected by the general water quality criteria that are specified in the state's Water Quality Standards at 10 CSR 20-7.031(4).

## **Designated use that are impaired**

- Warm Water Habitat (WWH)

## **Criteria that apply**

The state's general water quality criteria at 10 CSR 20-7.031(4) are applicable to all waters of the state at all times. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:

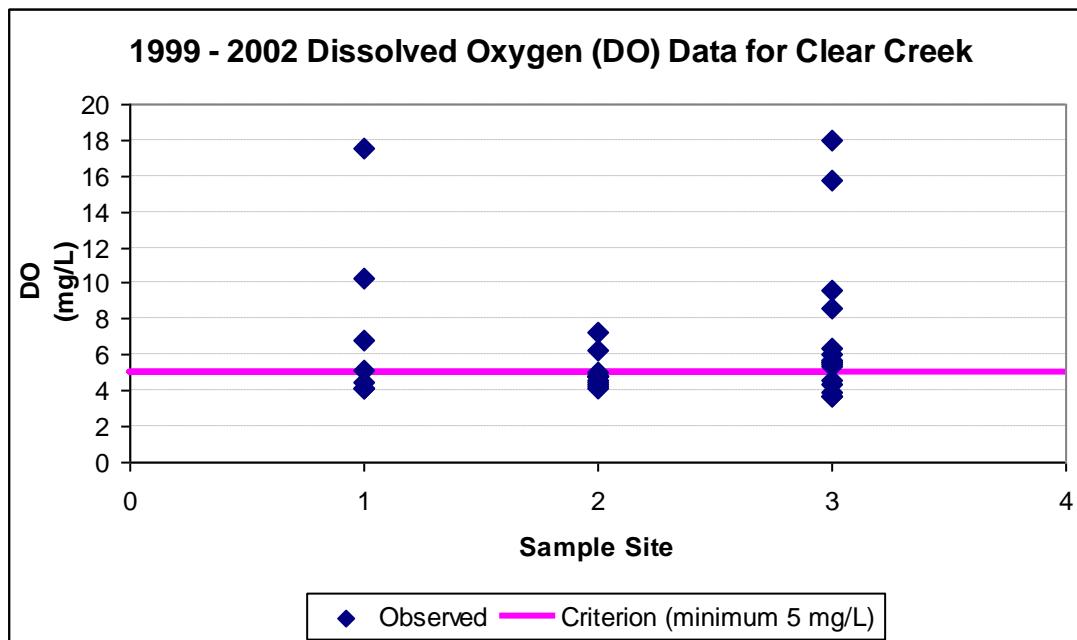
- Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal, or aquatic life [10 CSR 20-7.031(4)(D)].
- Waters shall be free from physical, chemical, or hydrologic changes that would impair the natural biological community [10 CSR 20-7.031(4)(G)].

Specific criteria for dissolved oxygen can be found in 10 CSR 20-7.031 Table A. For the protection of warm water habitat, the dissolved oxygen criterion is a minimum of 5 milligrams per liter (mg/L).

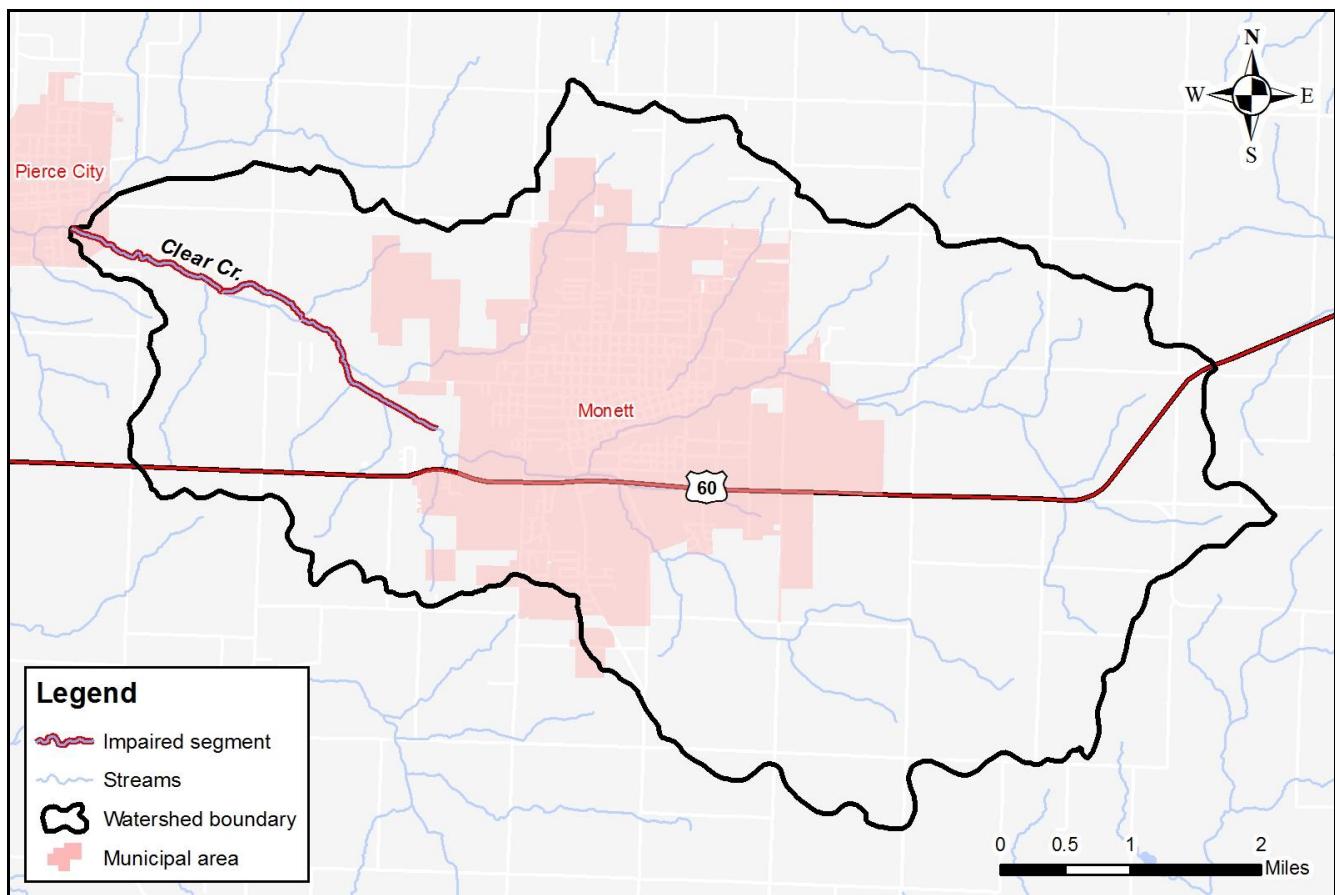
## **Assessment and water quality data**

The Department of Natural Resources collected and analyzed aquatic invertebrate samples.

Invertebrate communities are judged to be impaired if the percent of sampling sites receiving a score of 16 or more is significantly less than for reference streams in the same ecological drainage unit. Scores of 16 or more are considered to reflect an unimpaired invertebrate community. Invertebrate data was collected from Clear Creek in the 1997 and 2000. All sample sites received scores lower than 16. The most likely stressors resulting in the low scores are believed to be low dissolved oxygen and physical habitat changes caused by large growths of benthic algae. Both of these conditions are related to excess nutrients in Clear Creek. Dissolved oxygen measurements from Clear Creek from 1999 – 2002 show violations of the state's dissolved oxygen criterion.



## Map of the Clear Creek Watershed



### TMDL for Clear Creek

The Clear Creek TMDL will calculate the maximum amount of each listed pollutant that the stream can receive and still meet water quality standards. The TMDL will also identify all potential or suspected pollutant sources in the watershed and distribute the allowable pollutant loads among those various sources. When developed, the Clear Creek TMDL will use the most current and available data. For this reason, the final TMDL may present information that differs from that contained in this information sheet.

### For more information call or write:

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